

**REMARKS**

In accordance with the forgoing, claims 1, 3-6 have been amended, claim 2 has been canceled, and no new claims have been added. Claims 13-14 have been withdrawn from consideration. Claims 1, 3-12, 15 and 16 remain pending for consideration. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1, 3-12, 15 and 16 are pending in this application. Reconsideration is respectfully requested.

**Rejections Under 35 U.S.C. § 102**

On pages 3-4 of the Office Action, the Examiner rejected claims 1 and 15 Under 35 U.S.C. § 102(e) as being anticipated by Perkins et al (US Patent Application Publication Number 2004/0156325, hereinafter Perkins).

Claim 1 recites, as amended "...said network management unit comprises a first storing unit storing topology information that represents a connection relationship among the plurality of communication nodes, a second storing unit storing route information that represents a communication route connecting the first communication node and the second communication node, and a controlling unit giving an instruction to a communication node involved in the communication route based on the topology information and the route information."

Claim 15 recites similar features, that is, the first storing unit, the second storing unit and the controlling unit as claim 1.

Perkins describes an optical transmission network with asynchronous mapping and demapping. Perkins also describes a digital wrapper frame.

However, Perkins fails to disclose topology information and route information of the present invention. That is to say, Perkins fails to disclose the first storing unit and the second storing unit of the present invention.

Therefore, Applicant submits that claims 1 and 15 patentably distinguish over the prior art. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections under § 102.

**Rejections Under 35 U.S.C. § 103**

On pages 4-11 of the Office Action, the Examiner rejected claims 2-12 and 16 Under 35 U.S.C. § 103(a) as being unpatentable over Perkins in view of Fant et al (US Patent Application Publication Number 2004/0076151, hereinafter Fant).

Fant describes a method for accessing a signaling message for a frame to be transmitted through an optical network along a path, deriving an identifier of the path using the signaling message, attaching the identifier to an overhead section of the frame, and transmitting the frame through the optical network on the path with the attached identifier. Fig. 5 shows a restoration scenario in which the link between nodes failed. Fig. 6 shows a flow chart in which the secondary path is activated as a primary path when path failure has been detected.

The Examiner indicates that Fant discloses the first storing unit and the second storing unit of the present invention in Fig. 1 and paragraphs 0019-0025. However, Fig. 1 of Fant shows only general configuration of GMPLS network. In addition, although paragraphs 0019-0025 describe a GMPLS link state database, this database is different from the first and second storing units of the present invention.

Thus, Fant fails to disclose the topology information and the route information of the present invention. That is to say, Fant fails to disclose the first storing unit and the second storing unit of the present invention. Therefore, even if Perkins and Fant are combined, the invention recited in claims 1 and 15 were not made from the cited references.

Claims 3-12 depend from claim 1, and claim 16 depends from claim 15. Therefore, Applicant submits that claims 2-12 and 16 patentably distinguish over the prior art.

Claim 5 recites, as amended "a payload of the digital wrapper frame includes a first area and a second area... controlling unit gives to a corresponding communication node an instruction for setting up the communication route by using the first path to transmit data in the first area if a fault is not detected on the network, and gives to a corresponding communication node an instruction for setting up a bypass route by using the second path to transmit data in the second area according to a location where a fault occurs if the fault is detected on the network".

That is to say, in the invention recited in claim 5, when the fault is not detected, data stored in the first area of the digital wrapper frame payload is transmitted using the first path, meanwhile when the fault is detected on the network, data stored in the second area of the digital wrapper frame payload is transmitted using the second path. Please note that the added feature is supported by, for example, Figures 15-18.

Fig. 6 of Fant shows a flow chart in which the primary path is used when no path failure has been detected, and the secondary path is activated when path failure has been detected.

However, Fant fails to disclose a configuration in which a data frame payload includes a first area for data to be transmitted using the first path and a second area for data to be transmitted using the second path. That is to say, Fant fails to disclose the invention recited in claim 5.

Therefore, Applicant submits that claim 5 further patentably distinguishes over the prior art.

Claim 6 recites, as amended "a determining unit determining, when a fault occurs on a communication route connecting the first communication node and the second communication node, whether or not to set up a bypass route according to whether a protocol transmitting a signal via the communication route has a recovery function". Please note that the amended feature is supported by, for example, Figures 22-25.

None of the cited references disclose the "determining unit" of the present invention. Therefore, Applicant submits that claim 6 further patentably distinguishes over the prior art.

Accordingly, Applicant respectfully request reconsideration and withdrawal of the rejections under § 103.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,  
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